ENERGY TIDBITS

March 2004

Hydrogen Fuel Cell Seminar will be held at Pierce Cedar Creek Institute in Hastings on Saturday, March 6, 8:30 am - 3:00 pm. This one day seminar will cover an introduction to fuel cells, stationary fuel cells, vehicle fuel cells, and fuel cell infrastructure. Cost is $25. http://www.cedarcreekinstitute.org/conferences.htm

ENERGY STAR Home certification in Gainesville, Florida nets an additional $4,000 in the value of a home's appraisal according to Karl E. Sayles of Darty Appraisal Service. The home energy rating determined that the ENERGY STAR upgrade would save approximately $40 per month in utility costs while adding only $20 per month in added mortgage costs. http://www.natresnet.org/herseems/appraiser_letter.htm

Active Solar Heating Seminar will be held on Saturday, March 20, 9 am- 5 pm at the GLREA Energy Center in Dimondale. Apprentice Photovoltaic Training Class will be held on March 29-April 2. A workshop for Dual Mode Air System Installation will be held on April 16-17. http://www.glrea.org

Introduction to the Science & Engineering of Fuel Cells & Fuel Processors is being offered by the University of Michigan Chemical Engineering Department. The Continuing Education Industrial Short Course will be offered on May 5, 6 & 7th in Ann Arbor. This cutting-edge fuel cell and fuel processor course is open to all interested individuals from industry, academia, & government. For additional information, call UM at (734) 764-7413, or go to http://www.engin.umich.edu/dept/cheme/fuelcellcrse/index.html.

Kettering University will construct the Center for Fuel Cell Systems & Powertrain Integration on its Flint campus thanks to a $1.8 million grant from the Economic Development Administration (EDA), U.S. Dept. of Commerce. Kettering will combine the EDA grant with $500,000 previously received from the State of Michigan and another $700,000 from industry and Kettering sources to begin the building project. The Industry Partnership Consortium includes Ford Motor, NextEnergy, Advance Measurements Inc., General Hydrogen, U.S. Army Tank Automotive & Armaments Command, and General Motors. Kettering will construct a new center that is approximately 8,600 sq.ft. -- 5,452 sq.ft. on the ground floor for laboratory space and another 3,150 sq.ft. on the first floor to support business incubator office space for new and existing companies.

Biofuel Infrastructure Project Grants are available to private corporations; schools, colleges, and universities; state, local and other units of governments; and agriculture cooperatives to plan, implement and evaluate a biofuel infrastructure project. Biofuel is defined as either E85 (85% ethanol &15% gasoline) or biodiesel (minimum 20% blend). Proposals are due April 14, 2004. The maximum grant award will be $24,500. For further information, contact Kelly Launder at 517/241-6223 or klaund@michigan.gov.

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Michigan's Retail Open Access Program has over 13,000 customers participating. These customers represent a total of 2,728 MW. For a complete report on the status of electric choice go to: http://www.cis.state.mi.us/mpsc/electric/restruct/status.htm

Solar Absorption Air Conditioning will be demonstrated at the Audubon Nature Center in Los Angeles. The Center, according to the solar AC system's designer, James Bergquam, will be the first completely solar-cooled building in southern California and one of only a handful in the world. The new $90,000, 10-ton system utilizes an 800-sq.ft. array of 408 Chinese Sunda vacuum tube solar collectors. The Sunda tubes operate on a heatpipe principle: low-pressure water always present inside the tubes is heated to a vapor that flows up to the copper condenser section of the tube, a sleeve that protrudes from the condenser section of the internal heat pipe. This heats water flowing through the manifold that connects all of the tubes, transferring thermal energy from the collectors to the 1,200-gallon insulated high-temperature hot water storage tank. When the stored water reaches a minimum of 180 degrees F. (it can reach 192 degrees F.), hot water from the tank is pumped through the generator in a Yazaki 10-ton single-effect absorption chiller. A lithium bromide salt solution in the chiller boils and produces water vapor as a refrigerant that subsequently is condensed; its evaporation at low pressure produces the cooling effect in the chiller. This is transferred to the interior of the Center by chilled water that is pumped through the evaporator in the chiller and then through fan coil units. The system also will provide space heating in the winter on any days cool enough to require that, and hot water throughout the year. A small amount of electricity is required to run the pumps that move the chilled water and hot water, and run the fans -- and this too is completely solar-powered, with some of the electricity from the new center's 25 kW photovoltaic system and battery bank. The system uses only .4 kW per ton of electricity to operate compared to the 1.6 kW-per-ton electricity consumption of compressor-type air conditioning. An added bonus: the solar panels provide added insulation to the roof, while also reducing the air conditioning load by 20 percent and extending the life of the roof. The Audubon Nature Center has just received from the U. S. Green Building Council the highest 'Platinum' LEED rating. *(Heating, Ventilation, Air Conditioning & Refrigeration News (http://www.HVACRNews.com), December 2003)*

Canadian Coast Guard will purchase up to 500 solar-powered light-emitting diode lanterns.

Michigan Department of Labor & Economic Growth

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